

# **DEQ Nutrient Criteria Affordability Advisory Group**

## **Meeting Summary**

### **October 15, 2008**

#### **Introductions**

Gerald Mueller, the Nutrient Criteria Affordability Advisory Group (NCAAG) facilitator, and those attending the initial DEQ Nutrient Criteria Affordability Advisory Group (NCAAG) introduced themselves. A list of the members and others in attendance is attached below as Appendix 1.

#### **Agenda**

The NCAAG agreed to the following agenda for this meeting:

- Review of the September 15, 2008 Meeting Summary
- White Paper Update
- Public Entity Criteria
- Private Entity Criteria
- Next Meeting

#### **September 15, 2008 Meeting Summary**

NCAAG members made two changes to the September 15, 2008 meeting summary, both in the answer to question on page 3, *“One of your Power Point slides stated that large towns benefit from economies of scale. Does this mean that the affordability variance would not likely apply large towns?”* The revised answer was:

Answer - Yes, Montana’s largest seven cities would be unlikely to receive variances under the proposed criteria because their economies of scale would cause them to fail the *Municipal Preliminary Screener*. These communities may request variances under the technology limit off-ramp; in this scenario, although the community would not experience substantial and widespread economic impacts from trying to meet the nutrient standards, the current state of technology is such that the community still could not meet the stringent instream nutrient standards. Therefore, the community would be asked to construct a wastewater facility to currently available and proven limits of technology for nutrient removal. The variance would reflect the limits-of-technology facility. Also, since nutrient criteria have not yet been developed for Montana’s large rivers and lakes, both affordability and technology off-ramps would not be applicable to them. At the state level, the decision maker on affordability criteria will be the Board of Environmental Review (BEQ) based on recommendations from DEQ and public input.

#### **White Paper Update**

Dr. Mike Suplee stated that the DEQ white paper providing the scientific and technical basis of the numeric nutrient standard proposal is under review and should be finalized within the next few weeks. DEQ will convene a meeting to provide a peer review of the paper on October 20. The paper will be made public before the November 19, 2008 NCAAG meeting. Copies of the paper will be provided to the group email list.

*Question - What will be the process once the paper is published?*

Answer - The nutrient criteria proposal plus supporting documents will be available in hard copy and via the DEQ web page. No formal public comments will be taken on the proposal, but informal comment will be accepted. The formal rule making process, including public comment, is planned to begin in the middle of next year. We will be working with the legislature and will issue draft rules. Once DEQ makes a recommendation to the Board of Environmental Review, a decision by the Board on final rules will likely take six months. Finalizing the rule will probably occur in 2009.

*Question - What would be the duration of an affordability or technical variance to the nutrient standards?*

Answer - Although the decision has not been finalized, we are assuming that the variance would exist for a 20 year period with re-justifications required every three to five years. EPA requires us to relook at any variance every three to five years. The options at the review step include renewing the variance or modifying the beneficial public use supported by the water body.

### **Public Entity Criteria**

DEQ offered three alternatives for evaluating a proposed project affordability (i.e., the scope of the proposed project):

- Consider only the costs of the upgrade to the wastewater facility itself;
- Include the costs of the upgrade to the wastewater facility and all directly relevant infrastructure; or
- Address only the incremental cost increase associated with upgrades intended to meet numeric nutrient criteria.

*Question - Would directly relevant infrastructure include buried infrastructure?*

Answer - Yes.

*Question - Would operation and maintenance costs be included?*

Answer - Yes.

*Comment - We must consider cause and effect. If all upstream costs are included in the affordability analysis, then compliance with the affordability criteria would be rare and a variance would almost always be granted. This approach is unlikely to pass legal muster.*

*Comment - It is important for the affordability analysis to consider everything, not just the direct costs of a treatment plant project.*

**NCAAG Recommendation - Pending a discussion with EPA Headquarters Economist Tim Connor, the NCAAG agreed unanimously to recommend the second of the three alternatives, the affordability evaluation should be based on the costs of the wastewater facility upgrade and all directly relevant infrastructure. The group re-phrased the alternative to better reflect its purpose to: "Upgrade to the wastewater facility collection, treatment, and disposal system".**

Definition of the Affected Area for Substantial Analysis and Widespread Analysis - DEQ recommended the following definitions of the affected area:

- Substantial evaluations - The area would be the governmental jurisdiction responsible for paying compliance costs. If only a proportion of the community is served, only those who pay are the affected community; however, if such fine-resolution data are not available, then data for the whole community may be used instead.
- Widespread evaluations - The area would be the geographic area where direct project costs pass through to the local economy. In the case of municipal pollution control projects, the affected community is most often the immediate municipality.

***NCAAG Recommendation - The NCAAC agreed unanimously to these two definitions.***

Definition of a Resident - DEQ recommended the approach used by the Montana Department of Commerce (DOC) Census and Economic Information Center (CEIC). During the census, a person declares their primary residency as that place where “they spend most of their time.” Thus the definition is what a person declares as his or her residence.

***NCAAG Recommendation - The NCAAC agreed unanimously to this approach.***

Safe Drinking Water Advisory Committee Conclusions - Dr. Suplee reported that the Safe Drinking Water Advisory Committee considered allowing a 2.5% median household income threshold for applying safe drinking water standards because of the difficulty small communities have with meeting the cost of compliance. However, the Committee did not adopt this threshold to avoid the injustice inherent in a two-tiered standard for drinking water. Dr. Suplee stated that this situation is not analogous to nutrient standards because the situation regarding nutrients is more complex. Nutrients may be addressed through non-point source reductions due to TMDL plans.

*Comment - I might agree if I could see an end point for non-point nutrient pollution.*

*Comment - Nutrients should be considered on a watershed basis. Some communities draw drinking water below the discharge of other communities' waste water.*

Response - A TMDL incorporates the affordability-based discharge limits, and uses the base numeric nutrient standards as the end goal for clean up which includes addressing non-point sources.

Substantial Evaluation Categories - Projects for which the Municipal Preliminary Screener results in calculated values in the 1-2% range are subject to secondary tests set out in Work Sheet F. This work sheet is a matrix that originally evaluated debt, socio-economic, and financial management indicators.

***NCAAG Recommendation - After a discussion, the NCAAC agreed to the following changes to Work Sheet F:***

- ***Drop the debt indicator and the second financial management indicator (the property tax collection rate over last ten years);***
- ***Assess both the poverty rate and the low-to-medium income (LMI) index as one of the socio-economic indicators, pending assurance that LMI data are available;***
- ***Change the first listed financial management indicator to include the sum of property tax and fee revenues per an income measurement (e.g. per capita household median income)***

*rather than as a percent of full market value of taxable property. NCAAC members also asked DEQ to review and report at the next meeting on the breakpoints for the sum of property tax and fee revenues per an income measurement. DEQ also agreed to look at the LMI data and devise reasonable breakpoints for it as well.*

Susan Ockert, Senior Research Economist with the Census and Economic Information Center of the Montana Department of Commerce (DOC), stated that LMI data are calculated every ten years at the block group level. The smallest census population unit is the city block. A block group is, as the name implies, a group of blocks. LMI data calculated from the Housing and Urban Development (HUD) income level categories. Presently, annual data are available for metropolitan areas with a population of 65,000 or more. Beginning in 2012, annual data for determining poverty rates or the LMI will be available for block groups in all communities. In Montana, we currently have annual data for five counties. The most recent poverty rates are available for counties and school districts are based on 2005 data.

Widespread Evaluation Categories - Dr. Jeff Blend reviewed simplified factors requested at the September meeting to consider in making a determination of widespread social and economic impacts. Widespread impacts are considered if the project is determined to have substantial impacts. DEQ proposes to assess two primary criteria in the widespread analysis:

- How the economy in general would be affected, if at all, by having to meet requirements? To determine the effect, one would consider if a loss of employment due to a reduction in business activity or closure, how many people would become unemployed or what percent increase in unemployment rate would result, and if the population would change.
- If unemployment occurred as a result of meeting standards, would other ample job opportunities exist to take up the slack?

Dr. Blend explained that the widespread analysis is not quantitative, but instead would be a case-by-case qualitative application of best professional judgment. He illustrated the simplified factors using hypothetical cases in Circle and Lewistown. In the Circle case, the new project would have widespread social and economic impacts. The Lewistown case would be borderline. Dr. Blend stated that meeting the widespread test to allow an affordability variance would likely require a business closure that could not be absorbed in the local economy.

*Comment - I am concerned about the apparent requirement that a business close as a result of costs of meeting the nutrient standard before the widespread test would be met. The quality of life of low-income people might be adversely affected by an additional expenditure regardless of a business closure. Somehow the widespread test should address this.*

*Comment - Impacts to low-income people should be addressed through the structure of waste water rates. For example, the first block of waste water service could be provided at a low rate.*

***NCAAG Recommendation - The NCAAC agreed to the two widespread criteria with the addition of a third addressing the quality of life for low-income people. This new criterion addressing quality of life may, for simplicity, be added in with the other criteria that comprise the first of the two existing widespread evaluation categories. The DEQ should propose language for the new criterion and NCAAG will discuss it at the next meeting.***

Discussion With Tim Connor - Dr. Suplee connected EPA's Tim Connor to the meeting via speaker telephone. Mr. Connor was asked two questions. First, would EPA agree to evaluating affordability based on the costs of the upgrade to the wastewater facility collection, treatment, and disposal system? Mr. Connor answered that EPA would agree. Second, he was asked for EPA's view of the NCAAC's recommendations regarding Work Sheet F. Mr. Connor replied that he agreed with looking less at debt and financial management criteria and more at socio-economic factors. He stated that if EPA were to do their 1995 guidance document again, they would make the criteria more like those the NCAAG has developed. He said that EPA does not look at specific variances granted by states, but focuses instead on changes to water quality standards. He recommended that DEQ carefully document the rationale for its decisions regarding nutrient standards and criteria.

#### General Comments on the Affordability Criteria

*Question – Have economic impacts of meeting nutrient criteria been applied at the watershed or sub-watershed level?*

Answer - They have been applied in three areas, Boston, Los Angeles, and the Chesapeake Bay. In the latter case, three levels of treatment were considered, and 85% of the communities in the watershed were determined not to qualify for exemptions (i.e., they did not demonstrate substantial and widespread economic impacts).

*Question - Were hardship variances allowed in any of these cases?*

Answer - Yes, in the Boston case they were allowed.

*Question - Is any other state developing nutrient standards/criteria and variances?*

Answer - Montana is the first. A few other states have numeric nutrient criteria and many have draft criteria, but we are one of the first to take a hard look at the issue of nutrient criteria affordability across the whole state.

*Question - What would happen if affordability variances were granted but the water body did not meet its beneficial uses?*

Answer - The beneficial use could be modified based on nutrient standard compliance, but not an affordability analysis. DEQ would like to give the waterbody time (i.e., 20 yrs) to see if the water quality problem is correctable.

*Comment - In the Helena valley, non-point nutrient sources overwhelm the impacts of point sources. I see no sense in agreeing to a process that addresses only 20% of the problem.*

Response - Point sources are regulated, but non-point sources are not. DEQ sees three possible options for addressing this issue, a cap and trade system, monitoring and modeling through the TMDL process, and Level II requirements for individual septic systems.

*Comment - One option would be to complete this process and develop affordability criteria for variances to nutrient standards and shelve the variances until the distribution of costs between point and non-point sources is addressed.*

*Question - Has DEQ decided what the limit of nutrient removal technology is?*

Answer - No. We discussed setting limits with EPA and were advised to have our engineers approach it on a case-by-case basis.

*Question - Has EPA established limits for nutrient removal technology?*

Answer - Other than national secondary standards, EPA has not.

*Comment - The Clean Water Act is meant to be technology forcing in pursuit of the statutory goal of ensuring that all of our waters are fishable and swimmable.*

*Comment - Affordability criteria are only one piece of the puzzle. Technology limits are another. We need predictability over a 20 year time frame so that we can pay off the debt incurred to meet standards before new ones are imposed.*

*Question - In one of your slides you suggest a 5% threshold for point source contributions to a water body. What would be required if a point source contributes less than 5% of the nutrient load to a stream?*

Answer - The 5% threshold has not been adopted but we have discussed it. The idea is that point sources contributing less than a specific amount (e.g., 5%) to the total watershed nutrient problem would not be asked to meet stringent numeric nutrient standards, but would still be subject to national secondary treatment standards. This could be done through the assignment of a waste load allocation in the applicable TMDL.

*Question - We need to understand how all of the issues come together. For example, how many samples will be required, what standard exceedence rate will be allowed, will discharge levels be measured at the end of the pipe or in mixing zones?*

Answer - I have and will pass out a flow chart diagramming the entire nutrient standard review process. I also have information about implementation of the nutrient standards that I can share and will do so.

***NCAAG Recommendation - Before continuing to address public and private entity affordability criteria, DEQ should provide this group criteria or a general definition for the limits of technology.***

Response - We will do this for the next meeting.

## **Next Meeting**

### Date, Time and Location

The next meeting is scheduled for 9:00 to 4:00 p.m. on November 19, 2008 in room 105 of the Old Livestock Building on the Capitol Campus in Helena. If necessary, the NCAAG will have additional meetings beyond the November meeting; mid-January would be the most likely time for the subsequent meeting.

### Agenda Topics

The agenda will include the following.

- Discussion of the white paper (brief).
- Criteria/definition for the limits of technology.

- Review of the nutrient standard compliance process flow chart.
- Public entity affordability criteria:
  - Data availability for calculating the LMI index;
  - Breakpoints for the sum of property tax and fee revenues per an income measurement;
  - Review of the widespread criterion related to quality of life impacts on low-income community members; and
  - The amount a community would be expected to pay for waste treatment if it would sustain substantial and widespread economic impacts from trying to meet nutrient standards.
- Discussion of affordability criteria for private entity.



**Appendix 1**  
**NCAAG Attendance List**  
**October 15, 2008**

**Members**

Tim Burton	City of Helena
John Wilson	City of Whitefish
Earl Salley	Water Pollution Control Advisory Committee
Jim Edgcomb	Montana Department of Commerce, Treasure State Endowment Program
Dick Hoehne	Town of Philipsburg
Dave Aune	Great West Engineering
Jim Jenson	Montana Environmental Information Center
Scott Murphy	Morrison-Maerle, INC.

**Non-Voting Members**

Todd Teegarden	Montana Department of Environmental Quality (DEQ)
Dr. Jeff Blend	DEQ
Dr. Mike Suplee	DEQ

**Public**

Tim Magee	City of Helena
Phil Havor	City of Helena
Richard Opper	DEQ
Tom Adams	City of Bozeman
Dave Clark	H2R
Gary Swanson	RPA
Tina Laidlow	EPA
Rosemary Rowe	EPA
Bob Bukantis	DEQ
Paul LaVigne	DEQ